



State of Utah

Department of
Environmental Quality

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Executive Director

DIVISION OF AIR QUALITY
Richard W. Sprott
Director

JON M. HUNTSMAN, JR.
Governor

GARY HERBERT
Lieutenant Governor

DAQE-IN3321001-06

September 14, 2006

Michael Loyet
Third Dimensions Incorporated
633 Pleasant Ave
Geneva, Ohio 44041

Dear Mr. Loyet:

Re: Intent to Approve: Packing Products Manufacturing Plant, Salt Lake County – CDS B;
NA; HAPs
Project Code: N3321-001

The attached document is the Intent to Approve (ITA) for the above-referenced project. ITAs are subject to public review. Any comments received shall be considered before an Approval Order is issued.

Future correspondence on this Intent to Approve should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. Please direct any technical questions you may have on this project to Mr. Tim De Julis. He may be reached at (801) 536-4012.

Sincerely,

Tim Blanchard, Acting Manager
Minor New Source Review Section

TB:TDJ:kw

cc: Salt Lake Valley Health Department

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

**INTENT TO APPROVE: Packaging
Products Manufacturing Plant**

**Prepared By: Tim De Julis, Engineer
(801) 536-4012
Email: tdejulis@utah.gov**

INTENT TO APPROVE NUMBER

DAQE-IN3321001-06

Date: September 14, 2006

Third Dimensions Incorporated

**Source Contact
Michael Loyet
(440) 466-4040**

**Richard W. Sprott
Executive Secretary
Utah Air Quality Board**

Abstract

Third Dimension, Incorporated (3D) has requested permission to establish a new area source in West Jordan, Salt Lake County. 3D will manufacture foam packaging products at the West Jordan plant. 3D will employ two boilers to generate the steam required to expand the polystyrene or polyethylene beads that become the foam packaging items, within five molding machines and two pre-expansion chambers. The final product is packed and warehoused on site until customers can take delivery.

Salt Lake County is a Non-attainment area of the National Ambient Air Quality Standards (NAAQS) for PM_{10} (and SO_2). New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP), Maximum Achievable Control Technology (MACT) regulations, and Title V of the 1990 Clean Air Act do not apply to this source.

The emissions, in tons per year, will be as follows:

$PM_{10} = 0.46$, $NO_x = 2.20$, $SO_2 = 0.10$, $CO = 2.28$, $VOC = 24.66$, $HAPs = 1.23$

The Notice of Intent (NOI) for the above-referenced project has been evaluated and has been found to be consistent with the requirements of the Utah Administrative Code Rule 307 (UAC R307). Air pollution producing sources and/or their air control facilities may not be constructed, installed, established, or modified prior to the issuance of an Approval Order (AO) by the Executive Secretary of the Utah Air Quality Board.

A 30-day public comment period will be held in accordance with UAC R307-401-7. A notice of intent to approve will be published in the Salt Lake Tribune and Deseret News on September 18, 2006. During the public comment period the proposal and the evaluation of its impact on air quality will be available for both you and the public to review and comment. If anyone so requests a public hearing it will be held in accordance with UAC R307-401-7. The hearing will be held as close as practicable to the location of the source. Any comments received during the public comment period and the hearing will be evaluated.

Please review the proposed AO conditions during this period and make any comments you may have. The proposed conditions of the AO may be changed as a result of the comments received. Unless changed, the AO will be based upon the following conditions:

General Conditions:

1. This Approval Order (AO) applies to the following company:

Site Office

Third Dimension, Inc.
6208 West Dannon Way
West Jordan, Utah

Corporate Office Location

Third Dimension, Inc.
633 Pleasant Ave.
Geneva, Ohio 44041

Phone Number (801) 280-8886

(440) 466-4040

Fax Number (801) 280-8916

(440) 466-3032

The equipment listed in this AO shall be operated at the following location:

6208 West Dannon Way, West Jordan, Salt Lake County

Universal Transverse Mercator (UTM) Coordinate System: UTM Datum NAD 1927
4,492,757 meters Northing, 412,193 meters Easting, Zone 12

2. All definitions, terms, abbreviations, and references used in this AO conform to those used in the Utah Administrative Code (UAC) Rule 307 (R307) and Title 40 of the Code of Federal Regulations (40 CFR). Unless noted otherwise, references cited in these AO conditions refer to those rules.
 3. The limits set forth in this AO shall not be exceeded without prior approval in accordance with R307-401.
 4. Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved in accordance with R307-401.
 5. All records referenced in this AO, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request. Records shall be kept for the following minimum periods:
 - A. Emission inventories Five years from the due date of each emission statement or until the next inventory is due, whichever is longer.
 - B. All other records Two years
 6. 3D shall install and operate the equipment listed in condition #7 and shall conduct its operations of the West Jordan packaging products manufacturing plant in accordance with the terms and conditions of this AO, which was written pursuant to 3D's Notice of Intent submitted to the Division of Air Quality (DAQ) on May 15, 2006 and additional information submitted to the DAQ on June 25, 2006.
 7. The approved installations shall consist of the following equipment (or equivalent*):
 - A. Five (5) Molding Machines
 - B. Two (2) Pre-Expansion Chambers
 - C. Two (2) Boilers

Fuel Type	Natural Gas
Maximum Heat Input:	7,144,055 Btu/hr (200 hp) - each
- * Equivalency shall be determined by the Executive Secretary.
8. 3D shall notify the Executive Secretary in writing when the installation of the equipment listed in Condition #7 has been completed and is operational, as an initial compliance inspection is required. To insure proper credit when notifying the Executive Secretary, send your correspondence to the Executive Secretary, attn: Compliance Section.

If the construction and/or installation have not been completed within eighteen months from the date of this AO, the Executive Secretary shall be notified in writing on the status of the construction and/or installation. At that time, the Executive Secretary shall require documentation of the continuous construction and/or installation of the operation and may revoke the AO in accordance with R307-401-18.

Limitations and Tests Procedures

9. Visible emissions from any stationary point or fugitive emission source associated with the source or with the control facilities shall not exceed 10% opacity. Opacity observations of emissions from stationary sources shall be conducted in accordance with 40 CFR 60, Appendix A, Method 9.

10. The following limits shall not be exceeded:

490,000 pounds of expandable polymer beads processed per rolling 12-month period

To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. Records of processing shall be kept for all periods when the plant is in operation. Processing of expandable polymer beads shall be determined by examination of company purchase and billing records. The records of processing shall be kept on a daily basis.

Fuels

11. The owner/operator shall use natural gas as fuel in the boilers.

Volatile Organic Compound (VOC) and Hazardous Air Pollutants (HAPs) Limitations

12. The plant-wide emissions of VOCs and HAPs from the molding processes and associated operations shall not exceed:

24.66 tons per rolling 12-month period for VOCs

1.23 tons per rolling 12-month period for Ethylbenzene

Compliance with each limitation shall be determined on a rolling 12-month total. Based on the twentieth day of each month, a new 12-month total shall be calculated using data from the previous 12 months.

The VOC or HAP emissions shall be determined by maintaining a record of VOC or HAP emitting materials used each month. The record shall include the following data for each material used:

- A. Name of the VOC or HAPs emitting material, such as: paint, adhesive, solvent, thinner, reducers, chemical compounds, toxics, isocyanates, etc.
- B. Density of each material used (pounds per gallon)
- C. Percent by weight of all VOC or HAP in each material used

- D. Gallons of each VOC or HAP emitting material used
- E. The amount of VOC or HAP emitted monthly by each material used shall be calculated by the following procedure:

$$\text{VOC} = \frac{\% \text{ VOC by Weight}}{(100)} \times \frac{[\text{Density (lb)}]}{(\text{gal})} \times \text{Gal Consumed} \times \frac{1 \text{ ton}}{2000 \text{ lb}}$$

$$\text{HAP} = \frac{\% \text{ HAP by Weight}}{(100)} \times \frac{[\text{Density (lb)}]}{(\text{gal})} \times \text{Gal Consumed} \times \frac{1 \text{ ton}}{2000 \text{ lb}}$$

- F. The amount of VOC or HAP emitted monthly from all materials used.
- G. The amount of VOCs or HAPs reclaimed for the month shall be similarly quantified and subtracted from the quantities calculated above to provide the monthly total VOC or HAP emissions.

Records & Miscellaneous

- 13. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this Approval Order, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on the information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on the equipment authorized by this AO shall be recorded.
- 14. The owner/operator shall comply with R307-150 Series. Inventories, Testing and Monitoring.
- 15. The owner/operator shall comply with R307-107. General Requirements: Unavoidable Breakdowns.

The Executive Secretary shall be notified in writing if the company is sold or changes its name.

This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including R307.

A copy of the rules, regulations and/or attachments addressed in this AO may be obtained by contacting the Division of Air Quality. The Utah Administrative Code R307 rules used by DAQ, the Notice of Intent (NOI) guide, and other air quality documents and forms may also be obtained on the Internet at the following web site:

<http://www.airquality.utah.gov/>

The annual emissions estimations below include point source and fugitive emissions, and do not include fugitive dust, road dust, tail pipe emissions, or grandfathered emissions. These emissions are for the purpose of determining the applicability of Prevention of Significant Deterioration, non-attainment area, Maintenance area, and Title V source requirements of the R307. They are not to be used for determining compliance.

The Potential To Emit (PTE) emissions for 3D's West Jordan packaging products manufacturing plant are currently calculated at the following values:

	<u>Pollutant</u>	<u>Tons/yr</u>
A.	PM ₁₀	0.46
B.	NO _x	2.20
C.	SO ₂	0.10
D.	CO	2.28
E.	VOC	24.66
F.	HAPs	
	Total HAPs.....	1.23

The Division of Air Quality is authorized to charge a fee for reimbursement of the actual costs incurred in the issuance of an AO. An invoice will follow upon issuance of the final Approval Order.

Sincerely,

Tim Blanchard, Acting Manager
Minor New Source Review Section